

ABSTRACT OF THE DISCLOSURE

A radio transmitter is adapted to automatically adjust aerial impedance for a selected radio frequency. The radio transmitter includes a tunable radio frequency signal generator that has an impedance and is adapted to generate a radio frequency signal in the range of approximately 510 kilohertz to approximately 1705 kilohertz. The radio transmitter is also adapted to receive less than or equal to approximately 100 milliwatts of total input power. An aerial coupled to the tunable radio frequency signal generator and is adapted to transmit the radio frequency signal. The aerial has an output voltage, an aerial impedance and a length of less than or equal to approximately three meters. An adjustable inductor coupled to the aerial. A sampler coupled to the aerial and is adapted to measure the aerial output voltage. A processing unit is coupled to the sampler and to the adjustable inductor. The processing unit responds to the measured aerial output voltage by adjusting the adjustable inductor until the aerial impedance is approximately matched to the radio frequency signal generator impedance.